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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 010080WO	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US02/16530	International filing date *(day/month/year)* 23 May 2002 (23.05.2002)	Priority date *(day/month/year)* 24 May 2001 (24.05.2001)
International Patent Classification (IPC) or national classification and IPC IPC(7): H04B 1/38; H04Q 7/20 and US Cl.: 455/574, 187.1, 556		
Applicant QUALCOMM INCORPORATED		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of ___ sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☐ Non-establishment of report with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
17 December 2002 (17.12.2002)	18 October 2003 (18.10.2003)
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Authorized officer Erika A. Gary Telephone No. 703-305-4750

Form PCT/IPEA/409 (cover sheet)(July 1998)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US02/16530

I. Basis of the report

1. With regard to the **elements** of the international application:*

☒ the international application as originally filed.

☒ the description:
pages 1-13 as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

☒ the claims:
pages 14-16, as originally filed
pages NONE, as amended (together with any statement) under Article 19
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

☒ the drawings:
pages 1-4, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

☐ the sequence listing part of the description:
pages NONE, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination(under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages NONE

☐ the claims, Nos. NONE

☐ the drawings, sheets/~~fig~~ NONE

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

** Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*
*** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US02/16530

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims 1-21	YES
	Claims NONE	NO
Inventive Step (IS)	Claims NONE	YES
	Claims 1-21	NO
Industrial Applicability (IA)	Claims 1-21	YES
	Claims NONE	NO

2. CITATIONS AND EXPLANATIONS
Please See Continuation Sheet

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

V. 2. Citations and Explanations:

Claims 1-21 lack an inventive step under PCT Article 33(3) as being obvious over Shimanuki, U.S. Patent No. 5,890,071 in view of Applicant's Admitted Prior Art (AAPR).

Regarding **claim 1**, Shimanuki discloses a device adapted to communicate with an audio mux, the audio mux receiving a vocoder input from a vocoder and an audio decoder input from an audio decoder, the device comprising:

a stereo/mono control unit (11) coupled to a codec (104, 6A,6B); (Figure 1, 4-7 column 3, lines 31-40)

the stereo/mono control unit receiving an input from the tuner(15), the stereo/mono control unit providing a control output to the codec to reduce power consumption in the codec. (Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column 5, lines 1-32)

Shimanuki fails to specifically disclose the receiver path comprising an audio mux. AAPR discloses a receiving path having an audio mux. (Figure 1; page 3; lines 12-13) It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shimanuki to include an audio mux for the purpose of directing the audio signals to be output to either through either the loudspeaker (19) or the loudspeaker (9).

Regarding **claim 2**, Shimanuki in view of AAPR further discloses the device of claim I wherein the control output is coupled to a plurality of components in a receive audio processing path of the codec. (Shimanuki: Figures 1 and 4-7)

Regarding **claims 3 and 4**, Shimanuki in view of AAPR discloses the device of claim 2 but fails to disclose the device wherein the plurality of components are in a right or left channel of the receive audio processing path.

The AAPR discloses that the plurality of components may be in either a right or left channel of the receive audio processing path. (Figure 1; page 3, lines 4-27) It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shimanuki such that the receive audio processing path included both a right channel and left channel for the purpose of allowing the audio signals to be output through either a loudspeaker (19) or a loudspeaker (9).

Regarding **claim 5**, Shimanuki in view of AAPR further discloses the device of claim 2 wherein the control output disables at least one of the plurality of components to reduce power consumption in the receive audio processing path of the codec. (Shimanuki: Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column5, lines 1-32)

Regarding **claim 6**, Shimanuki in view of AAPR further discloses the device of claim 2 wherein the plurality of components comprise a receive gain, a receive filter, a digital-to- analog converter, a left/right selector, and a headset amp. (Shimanuki: Figure 6; column 7, lines 55-60; AAPR: Figure 1)

Regarding **claim 7**, Shimanuki in view of AAPR further discloses the device of claim 6 wherein the control output disables at least one of the plurality of components to reduce power consumption in the receive audio processing path of the codec. (Shimanuki: Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column5, lines 1-32)

Regarding **claim 8**, Shimanuki in view of AAPR further discloses the device of claim 1 wherein the control output disables at least one of a plurality of components in a receive audio processing path of the codec when the audio mux input received by the stereo/mono control unit comprises voice signals. (Shimanuki: Figure 1; 4-7; column 3, lines 61-66; column 4, lines 36-67; column 5, lines 1-32)

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Regarding **claim 9**, Shimanuki in view of AAPR further discloses the device of claim 8 wherein the plurality of components comprise a receive gain, a receive filter, a digital-to-analog converter, a left/right selector, and a headset amp. (Shimanuki: Figure 6; column 7, lines 55-60; AAPR: Figure 1)

Regarding **claims 10 and 11**, Shimanuki in view of AAPR further discloses the device of claim I wherein the stereo/mono control unit further inherently receives plug-in detection input from a plug-in detection circuit that receives an I/O input from an I/O jack as evidenced by the fact that when it detected that the plug of headset (24) is inserted into the headset jack, other processes are performed. (Shimanuki: column 7, line 57-column 8, line 12)

Regarding **claims 12, 16 and 17**, Shimanuki discloses a method for processing received audio signals in a device, the method comprising disabling a tuner circuitry when the audio signals comprise voice signals; and enabling the telephone circuitry when the audio signals comprise music signals. Shimanuki further discloses the concept of providing power to both the tuner and telephone circuitry when the tuner is selected and providing power to only the telephone circuitry when the tuner is not selected for the purpose of conserving power. (Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column 5, lines 1-32)

Shimanuki fails to disclose that the receive audio path comprising a first channel and a second channel.

The AAPR discloses that the plurality of components may be in either a right or left channel of the receive audio processing path. (Figure 1; page 3, lines 4-27) It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shimanuki such that the receive audio processing path included both a right channel and left channel for the purpose of allowing the audio signals to be output through either a loudspeaker (19) or a loudspeaker (9).

Regarding **claim 13**, Shimanuki in view of AAPR discloses the method of claim 12 wherein the disabling of the first channel is performed by a stereo/mono control unit. (Shimanuki: Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column 5, lines 1-32)

Regarding **claim 14**, Shimanuki in view of AAPR discloses the method of claim 13 wherein the disabling of the first channel is performed by the control output of the stereo/mono control unit disabling at least one of a plurality of components in the first channel. (Shimanuki: Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column5, lines 1-32)

Regarding **claim 15**, Shimanuki in view of AAPR discloses the method of claim 14 wherein the plurality of components comprise a receive gain, a receive filter, a digital-to-analog converter, a left/right selector, and a headset amp. (Shimanuki: Figure 6; column 7, lines 55-60; AAPR: Figure 1)

Regarding **claim 18**, Shimanuki in view of AAPR discloses the method of claim 13 wherein the device comprises a vocoder and an audio decoder, (Shimanuki: Figures 1 and 4-7) Shimanuki fails to specifically disclose the receiver path comprising an audio mux that receives voice signals from the vocoder and music signals from the audio decoder. AAPR discloses a receiving path having an audio mux. (Figure 1; page 3; lines 12-13) It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shimanuki to include an audio mux for the purpose of directing the audio signals to be output to either through either the loudspeaker (19) or the loudspeaker (9) depending on whether the signals are voice or music.

Regarding **claim 19**, Shimanuki in view of AAPR discloses the method of claim 18. Shimanuki fails to specifically disclose the receiver path comprising an audio mux. AAPR discloses a receiving path having an audio mux. (Figure 1; page 3; lines 12-13) It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shimanuki to include an audio mux for the purpose of directing the audio signals to be output to either through either the loudspeaker (19) or the loudspeaker (9).

Regarding **claim 20**, Shimanuki in view of AAPR discloses the method of claim 12 further comprising determining whether a stereo output component is coupled to the device. (Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column 5, lines 1-32)

Regarding **claim 21**, Shimanuki in view of AAPR discloses the method of claim 20 further comprising disabling the first channel when the stereo output component is not coupled to the device. (Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column 5, lines 1-32)

---------- NEW CITATIONS ----------

US 5,890,071 A (SHIMANUKI) 30 March 1999 (30.03.1999), see Figures 1 and 4-8; column 3, lines 30-39; column 3, lines 61-67; column 4, lines 36-67; column 5, lines 1-33; column 6, line 60.